

**Varelisa® Cardiolipin IgG Antibodies - Device Modification**  
**510(k) Submission**  
**Section 9. Summary of Safety and Effectiveness**

**MAY 02 2002**

**9. 510(K) SUMMARY OF SAFETY AND EFFECTIVENESS**

This summary of safety and effectiveness information is being submitted in accordance with the requirements of The Safety Medical Devices Act of 1990 (SMDA 1990) and 21 CFR Part 807.92.

**Assigned 510(k) Number:** K020752

**Date of Summary Preparation:** February 11, 2002

**Distributor:** Pharmacia  
Diagnostics Division, US Operation  
7425-248-1  
7000 Portage Road  
Kalamazoo, MI 49001

**Manufacturer:** Pharmacia Deutschland GmbH, Diagnostics Division  
Munzingerstrasse 7  
D-79111 Freiburg, Germany

**Company Contact Person:** Michael Linss  
Manager, Regulatory Affairs  
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**Device Name:** Varelisa® Cardiolipin IgG Antibodies

**Common Name:** Cardiolipin autoantibody immunological test system

**Classification:**

<u>Product Name</u>	<u>Product Code</u>	<u>Class</u>	<u>CFR</u>
Varelisa® Cardiolipin IgG Antibodies	82MID	II	866.5560

**Substantial Equivalence to:**

Varelisha® Cardiolipin (IgG) Antibodies

**Intended Use Statement**

The Varelisha Cardiolipin IgG Antibodies EIA kit is designed for the semiquantitative and qualitative determination of IgG antibodies against cardiolipin in serum or plasma to aid in the diagnosis of antiphospholipid syndrome (APS) and to evaluate the thrombotic risk in patients with systemic lupus erythematosus (SLE).

**General Description of the Device**

The Varelisha Cardiolipin IgG Antibodies is an indirect noncompetitive enzyme immunoassay for the semiquantitative and qualitative determination of IgG antibodies against cardiolipin in serum or plasma.

Anti-cardiolipin antibodies (aCL) belong to the group of anti-phospholipid antibodies (aPL). aCL are considered to be of significant diagnostic relevance, as a correlation has been found between these antibodies and a tendency towards thromboses. This results in an increased incidence of venous/arterial thromboses (including apoplexy), thrombocytopenia, livedo reticularis, habitual abortion and neurological manifestations in aCL/LA-positive patients. Elevated levels of aCL may also be found in patients with cerebrovascular insufficiency or myocardial infarction. aPL play a direct role in the pathogenesis of APS.

**Varelisha® Cardiolipin IgG Antibodies Test Principle**

Varelisha Cardiolipin IgG Antibodies is an indirect noncompetitive enzyme immunoassay for the semiquantitative and qualitative determination of cardiolipin IgG antibodies in human serum or plasma. The wells of a microplate are coated with bovine cardiolipin antigen. Antibodies specific for cardiolipin present in the patient sample bind to the antigen.

In a second step an enzyme labeled second antibody (Conjugate) binds to the antigen-antibody complex which leads to the formation of an enzyme labeled antigen-antibody sandwich complex.

The enzyme labeled antigen-antibody complex converts the added substrate to form a colored solution. The rate of color formation from the chromogen is a function of the amount of Conjugate complexed with the bound antibody and thus is proportional to the initial concentration of the respective antibodies in the patient sample.

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**Device Comparison**

Varelisa Cardiolipin (IgG) Antibodies (the original/predicate device) and Varelisa Cardiolipin IgG Antibodies (the new/modified device) both are indirect noncompetitive enzyme immunoassays for semiquantitative and qualitative determination of IgG antibodies against Cardiolipin in serum or plasma.

Based on currently available data from the literature the measuring of these antibodies not only provides aid in the evaluation of the thrombotic risk in patients with systemic lupus erythematosus, but also aids in the diagnosis of the antiphospholipid syndrome (APS). Thus the intended use of Varelisa Cardiolipin IgG Antibodies was adapted to the current state of scientific knowledge.

The essential differences between both assays are the new choice of antigen supplier and a changed blocking procedure.

Important common features between old and new version are the nature of the antigen determining the specificity of the assay, Bovine Cardiolipin, and the presence of  $\beta$ 2-glycoprotein I in the blocking buffer.

**Laboratory equivalence**

The comparability of the new and the old version Varelisa Cardiolipin IgG Antibodies is supported by a data set including

- results obtained within a comparison study analyzing positive, equivocal and negative sera
- results obtained for externally defined Calibrators and Quality Assessment sera
- results obtained for samples from apparently healthy subjects (normal population)

The data show that the assay performs as expected from the medical literature. Differing results are probably due to the changed blocking procedure.

In summary, all available data support that the new/modified device, Varelisa Cardiolipin IgG Antibodies Assay is substantially equivalent to the predicate/original device, Varelisa Cardiolipin (IgG) Antibodies Assay, and that the new/modified device performs according to state-of-the-art expectations.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Michael Linss, Ph.D.  
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Pharmacia Deutschland GmbH  
Diagnostics Division  
Munzinger Strasse 7  
Freiburg  
GERMANY

Food and Drug Administration  
2098 Gaither Road  
Rockville MD 20850

**MAY 02 2002**

Re: k020752  
Trade/Device Name: Varelisa® Cardiolipin IgG Antibodies  
Regulation Number: 21 CFR 866.5660  
Regulation Name: Multiple Autoantibodies Immunological Test Sytem  
Regulatory Class: II  
Product Code: MID  
Dated: March 6, 2002  
Received: March 7, 2002

Dear Dr. Linss:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

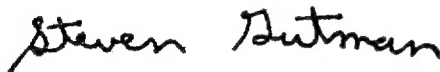
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

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This letter will allow you to begin marketing your device as described in your 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4588. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its internet address "<http://www.fda.gov/cdrh/dsma/dsmamain.html>".

Sincerely yours,

A handwritten signature in black ink that reads "Steven Gutman". The signature is written in a cursive style with a large, stylized 'S' and 'G'.

Steven I. Gutman, M.D., M.B.A.  
Director  
Division of Clinical  
Laboratory Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

**Varelisa® Cardiolipin IgG Antibodies- Device Modification**

**510(k) Submission**

**Section 1. Indications for Use Statement**

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510(k) Number: K020752

Device Name: **Varelisa® Cardiolipin IgG Antibodies**

**Intended Use Statement**

The Varelisa Cardiolipin IgG Antibodies EIA kit is designed for the semiquantitative and qualitative determination of IgG antibodies against cardiolipin in serum or plasma to aid in the diagnosis of antiphospholipid syndrome (APS) and to evaluate the thrombotic risk in patients with systemic lupus erythematosus (SLE).

(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE  
IF NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use ✓

OR

Over-The-Counter Use \_\_\_\_\_

(Per 21 CFR 801.109)



(Division Sign-Off)

Division of Clinical Laboratory Devices

510(k) Number K020752